In the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1-41. (canceled)

42-82. (canceled)

83-102. (canceled)

103. (currently amended) An essentially toxic-metal free liquid additive composition for use as at least a partial replacement of toxic metal stabilizer additive compositions for use in vinyl-containing resins, wherein the essentially toxic-free composition consists ~~essentially~~ of:

(a) ~~at least one phosphite ester selected from the group consisting of~~

~~(i) triaryl phosphites and C_{1-9} alkyl substituted derivatives thereof,~~

~~(ii) C_{8-15} alkyl phosphites,~~

~~(iii) mixed phosphites having at least one C_{8-15} alkyl moiety and at least one aryl moiety therein, a combination of said moieties totaling three,~~

~~(iv)~~ a C_{10-15} alkyl bisphenol-A phosphites and C_{1-9} alkyl substituted derivatives thereof; ~~,~~

~~(v) poly- and mono- alkylene glycol phosphites,~~

~~(vi) C_{8-15} pentaerythritol phosphites,~~

~~(vii) mono- and di- C_{8-15} alkyl *p*-cumyl phenol phosphites, and~~

~~(viii) blends thereof;~~

(b) ~~0.05 to 0.4 mole percent~~ a zinc additive; and

(c) ~~4 to 10 mole percent phosphorus~~ wherein a molar ratio of P/Zn is from about 80:1 to 4:1.

104. (currently amended) The composition of claim 103 wherein

~~(a) said zinc is from 0.1 to 0.3 mole percent; and~~ said ratio is from about 75:1 to 6:1.

~~(b) said phosphorus is from 5 to 8 mole percent.~~

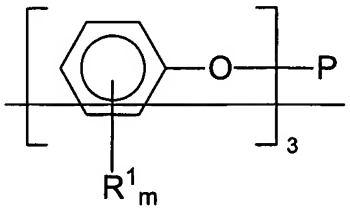
105. (currently amended) The composition of claim 104 wherein

~~(a) said zinc is from 0.15 to 0.25 mole percent zinc; and~~ said ratio is from about 73:1 to 8:1.

~~(b) said phosphorus is from 6 to 7 mole percent.~~

106. (currently amended) The composition of claim 105 wherein said ~~at least one~~ phosphite ester is ~~selected from the group consisting of~~

~~triaryl phosphites and C_{1-9} alkyl substituted derivatives thereof of formula (I)~~



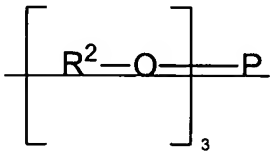
~~(I)~~

~~wherein~~

~~R^1 is independently selected from the group consisting of H and C_{1-9} alkyl, and~~

~~m is an integral value from 0 to 1 inclusive,~~

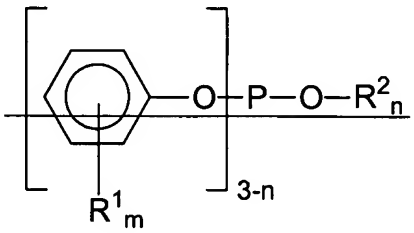
~~C_{8-15} trialkyl phosphites of formula (II)~~



~~(II)~~

~~wherein~~

~~R^2 is selected from the group consisting of C_{8-15} alkyl, mixed phosphites having at least one C_{8-15} alkyl moiety and at least one aryl moiety of formula (III)~~



~~(III)~~

~~wherein~~

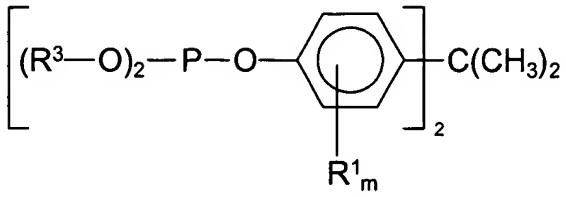
~~R^1 is as previously defined,~~

~~R^2 is as previously defined,~~

~~m is as previously defined, and~~

~~n is an integral value from 1 to 2,~~

C_{10-15} alkyl bisphenol-A phosphites of formula (IV) and C_{1-9} alkyl substituted derivatives thereof,



(IV)

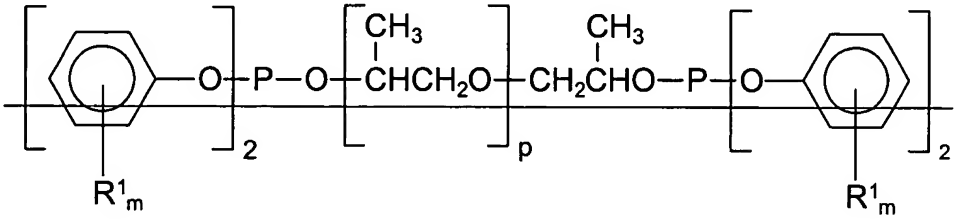
wherein

R^1 is independently selected from the group consisting of H and C_{1-9} alkyl ~~as previously defined~~;

R^3 is C_{10-15} alkyl; and

m is an integral value from 0 to 1 inclusive. ~~as previously defined,~~

~~poly- and di- alkylene glycol phosphites of formula (V)~~



~~(V)~~

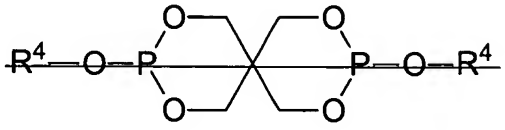
~~wherein~~

~~R^1 is as previously defined;~~

~~m is as previously defined; and~~

~~p is an integral value from 0 to 1 inclusive,~~

~~C_{8-15} pentaerythritol phosphites of formula (VI) and C_{1-9} alkyl substituted derivatives thereof,~~

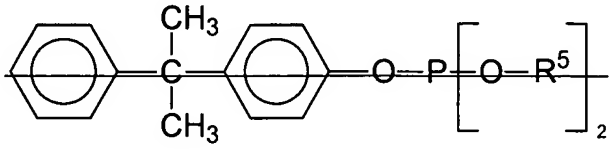


~~(VI)~~

~~wherein~~

~~R^4 is the same as R^1, and~~

~~mono- and di- C_{8-15} alkyl *p*-cumyl phenol phosphites and C_{1-4} alkyl substituted derivatives thereof of formula (VII)~~

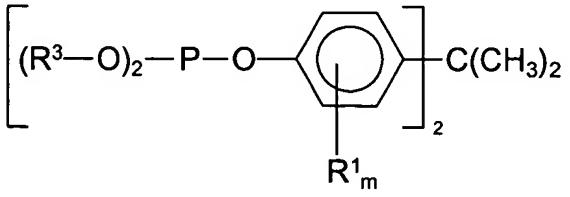


~~(VII)~~

~~wherein~~

~~R^5 is the same as R^1.~~

107. (previously presented) The composition of claim 106 wherein
    (a) a percentage weight loss of said composition as measured as a difference between a start and an end weight of said composition as measured after exposure to two hours at 110°C, is less than 1% by weight.
108. (previously presented) The composition of claim 107 wherein
    (a) a percentage weight loss is less than 0.5% by weight.
109. (canceled)
110. (canceled)
111. (canceled)
112. (canceled)
113. (currently amended) An additive composition for polyvinyl chloride resin which consists ~~essentially~~ of:
    (a) ~~at least one phosphite ester selected from the group consisting of~~
    a C_{10-15} alkyl bisphenol-A phosphites of formula (IV) and C_{1-9} alkyl substituted derivatives thereof,

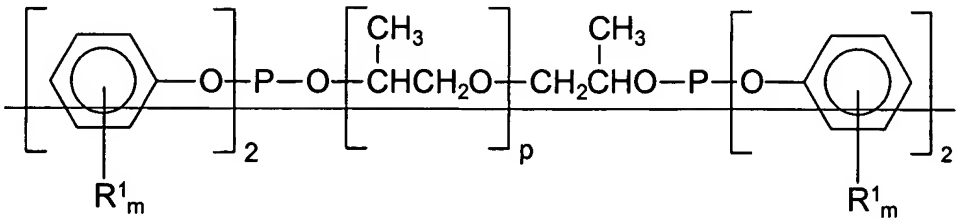


(IV)

wherein

R^1	is independently selected from the group consisting of H and C_{1-9} alkyl,
R^3	is C_{10-15} alkyl, and
m	is an integral value from 0 to 1 inclusive, and

~~poly- and di- alkylene glycol phosphites of formula (V)~~



~~(V)~~

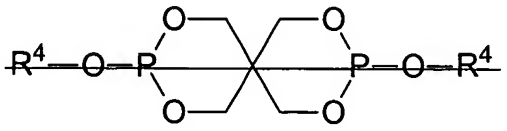
~~wherein~~

~~R^1 is as previously defined;~~

~~m is as previously defined; and~~

~~p is an integral value from 0 to 1 inclusive,~~

~~C_{8-15} pentaerythritol phosphites of formula (VI) and C_{1-9} alkyl substituted derivatives thereof,~~

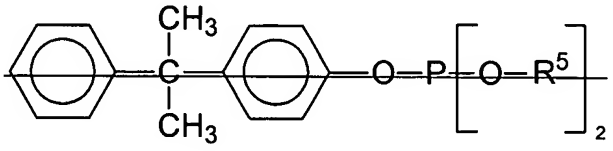


~~(VI)~~

~~wherein~~

~~R^4 is the same as R^1, and~~

~~mono- and di- C_{8-15} alkyl *p*-cumyl phenol phosphites and C_{1-4} alkyl substituted derivatives thereof of formula (VII)~~



~~(VII)~~

~~wherein~~

~~R^5 is the same as R^1; and~~

(a) zinc wherein a molar ratio of P/Zn ranges from 80:1 to 4:1.

114. (previously presented) The composition of claim 113 wherein

(a) said molar ratio of P/Zn ranges from 75:1 to 6:1; and

(b) said zinc is a zinc carboxylate.

115. (previously presented) The composition of claim 114 wherein

(a) said molar ratio of P/Zn ranges from 73:1 to 8:1; and

(b) said zinc carboxylate is selected from the group consisting of zinc octoate, zinc 2-ethylhexoate, zinc hexoate, zinc neodecoate, zinc decoate, zinc dodecanoate, zinc isostearate, zinc oleate,

zinc stearate, zinc tallow fatty acids, zinc palmitate, zinc myristate, zinc laurate, and zinc benzoate.

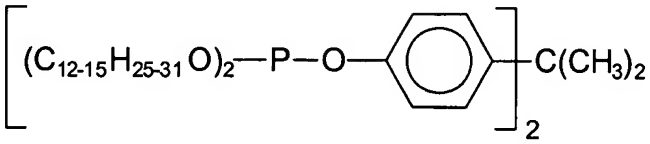
116. (canceled)

117. (canceled)

118. (currently amended) The composition of claim 11~~7~~3 wherein

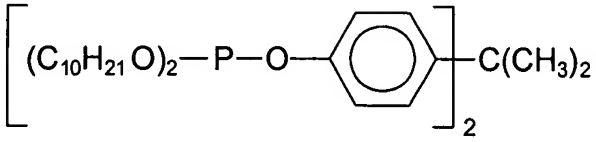
(a) said phosphite ester is selected from the group consisting of

$C_{12\text{-}15}$ bisphenol-A phosphite of formula (VIII) and



(VIII)

C_{10} bisphenol-A phosphite of formula (IX)



(IX).

119. (canceled)

120. (canceled)

121. (canceled)

122. (canceled)

123. (canceled)